

REMARKS

This is in response to the official action dated February 3, 2011. Reconsideration in view of the following is respectfully requested.

Election/Restrictions

Current claims are directed to a process determining and producing highly active glycoproteins, and a specific highly active glycoprotein produced (Group 1).

Claim Status

Claims 1-21 are active in the case, claims 1-9 and 19-21 stand rejected. Claims 12-18 stand withdrawn. Claims 1-8 and 19-23 are canceled. New claims 24-36 are added.

Support for claims 24-34

Claims 24-36 find support as detailed below.

Amended claims	support (WO 2005/080585)
Claim 32	Canceled claim 6
Claim 24	Claim 9 & page 6, lines 14 and 15
Claim 25&26	Claim 9 & page 12, lines 16 to 21
Claim 27	Claim 9 & page 6, lines 26-28
Claim 28	Claim 9 & page 4, lines 13-17
Claim 29	Canceled claim 2
Claim 31	Canceled claim 5

Claim 32	Canceled claim 6
Claim 33	Canceled claim 7
Claim 34	Canceled claim 8
Claim 35	Canceled claims 6 and 8 & page 18, lines 1 to 3 (expression of GM-CSF in NM-F9); page 48, line 9 to page 49, line 8 (example 6 using 90mM ManNac for expression of GM-CSF in NM-F9)
Claim 36	Claims 1 and 9, page 3, lines 8-23

Information Disclosure Statement/failure to comply with 37 CFR 1.98(a)(2)

A copy of the 1449 previously submitted August 11, 2006 and copies of all references crossed out are submitted together with this response as requested.

Specification

A sequence listing with the additional sequences and an amended page 40 are submitted with this response. No new matter has been added.

Claim Rejections – 35 USC § 102

None of the references cited by the Examiner discloses the claimed process or product.

Amended **process claim 9** and new **dependent claims 24 to 34** are directed to a process that supplements the medium with a SA precursor additive, then determines

the optimum concentration of said precursor by determining the activity of the formed sialylated glycoproteins selecting the concentration resulting in the sialylated glycoprotein variant that shows the highest activity.

Product claim 35 is directed to Glycoprotein GM-CSF produced by a specific process of claim 9 selecting a particular cell line and precursor concentration.

For **process claim 36**, the same as discussed for claim 9 above applies.

Fukuda is not concerned with recombinant expression of glycoproteins, instead, human erythrocyte glycoporphins are structurally analysed.

Lin (US 5,547,933) expresses EPO in CHO cells, but does not use cells having a defect in the sugar nucleotide biosynthetic pathway of sialic acids.

WO 2000/52135 discloses processes to make sialylated glycoproteins, and manipulating levels of CMP-SA by adding key precursors such as ManNAc. However, WO 2000/52135 does not disclose how the activity of a glycoprotein may be optimized by comparing the formed sialylated glycoprotein to a reference protein and selecting the glycoprotein with the highest activity. Notably, unlike the present invention, WO 2000/52135 does not disclose that the optimal degree of glycoprotein sialylation for maximum glycoprotein activity may be below 100% sialylation. In contrast, WO 2000/52135 adds precursors of CMP-SA to enhance the donor substrate CMP-A as high as possible to achieve a degree of sialylation as high as possible.

Accordingly, applicant believes claim 9, dependent process claims and claim 36 are novel and inventive. In addition, **WO 2000/52135** is focused on insect cells which unlike the cells used in the present invention do not have a defect in glycosylation; instead, insect cells naturally do not glycosylate glycoproteins with terminal sialic acids.

Furthermore, none of the references discloses GM-CSF as claimed in claim 35. Accordingly, applicant believes claim 35 is novel and inventive.

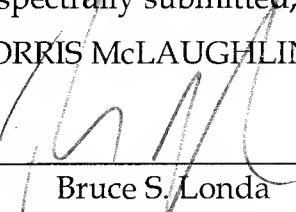
Wherefore, early and favorable action is earnestly solicited.

EXTENSION OF TIME

Applicant hereby requests a one-month extension of time, the fee for which may be charged to Deposit Account no. 14-1263.

ADDITIONAL FEES

Please charge any insufficiency of fees, or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,
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